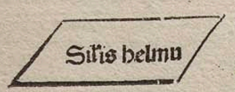
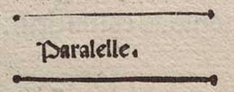
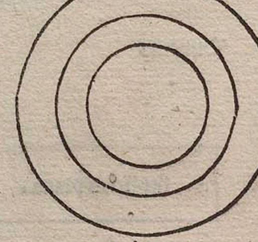
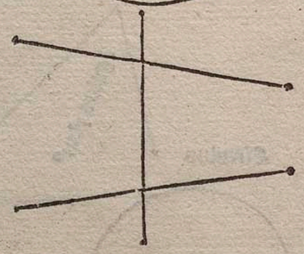
Gift of J. Wangenheim
to Math. Dept.









¶ Alia eſt ſimilis helmuaym que oppoſita latera habet equalia atqꝫ oppoſitos angulos equales: idē tamen nec rectis angulis nec equis lateribus cōtinet̄: Preter has autē oēs quadrilatere figure helmuariphe nominantur. ¶ Equidiſtantes linee ſunt que in eadem ſuperficie collocate atqꝫ in alterutram partem ꝓtracte non conueniunt etiā ſi in infinitum protrahantur.

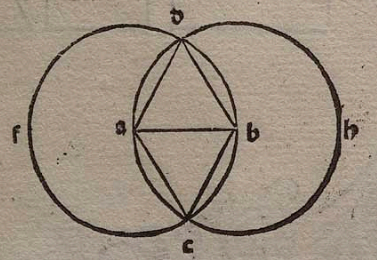
Petitiones ſunt quinqꝫ: ¶ A quolibet pūcto in quemlibet punctum rectā lineā ducere atqꝫ lineā definitā in cōtinuū rectūqꝫ quātūlibet protrahere. ¶ Super centrū quodlibet quātumlibet occupando ſpacium circuluꝫ deſignare. ¶ Omnes rectos angulos ſibiinuicem eſſe equales: ¶ Si linea recta ſup̲ duas lineas rectas ceciderit duoqꝫ anguli ex vna parte duobꝰ rectis angulis minores fuerint iſtas duas lineas in eādē p̄te ꝓtractas ꝓculdubio ꝯiūctim ire. ¶ Duas lineas rectas ſup̲ficiē nullam concludere.

Communes animi ꝯceptiones ſunt hee: ¶ Que vni ⁊ eidē ſunt equalia ⁊ ſibiīuicē ſunt equalia: ¶ Et ſi equalibꝰ equalia addant̄ tota quoqꝫ fiēt equalia. ¶ Et ſi ab equalibꝰ eq̄lia auferant̄ que relinquūt̄ erūt equalia. ¶ Et ſi ab ineq̄libus equalia demas q̄ relinquūt̄ erūt ineq̄lia. ¶ Et ſi ineq̄libus equalia addas ipſa quoqꝫ fiēt inequalia. ¶ Si fuerint due res vni equales ipſe ſibiīuicem erūt equales. ¶ Si fuerint due res quaꝝ vtraqꝫ vniꝰ eiuſdeꝫ fuerit dimidiū vtraqꝫ erit equalis alteri. ¶ Si aliqua res alicui ſuperponat̄ applicet̄qꝫ ei nec excedat altera alterā: ille ſibiīuicē erunt eq̄les. ¶ Omne totum ē maius ſua p̄te.

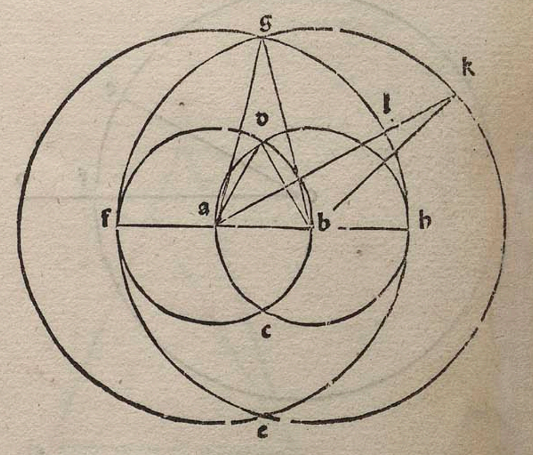
Sciendū eſt aūt ꝙ preter has ainmi cōceptiões: ſiue cōes ſcias multas alias que numero ſunt incōprehenſibiles pretermiſit Euclides: quarū hec eſt vna. ¶ Si due quantitates equales ad quālibet tertiā eiuſdem generis cōparentur ſimul erunt ambe illa tertia aut eque maiores: aut eque minores: aut ſimul equales. ¶ Itē alia Quanta eſt aliqua quantitas ad quālibet aliam eiuſdē generis tantā eſſe quālibet tertiā ad aliquam quartā eiuſdem generis in quantitatibꝰ continuis: hoc vniuerſaliter verum eſt ſiue antecedentes maiores fuerint conſequentibus ſiue minores. magnitudo enim decreſcit in infinitū. in numeris aūt non ſic: ſed ſi fuerit primus ſubmultiplex ſecundi: erit quilibet tertius eque ſubmultiplex alicuiꝰ quarti: quoniā numerus creſcit in infinitū: ſicut magnitudo in infinitum minuitur.

Propoſitio prima.

Triangulum equilaterum ſupra datam lineam rectam collocare.



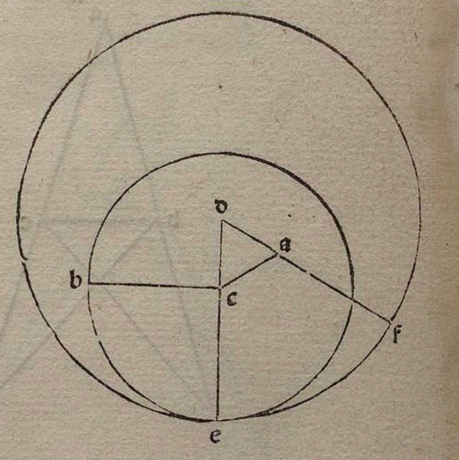
¶ Eſto data linea recta.a.b.volo ſuper ipſam triangulū equilaterū cōſtituere ſuper alterā eius extremitatē.ſ.in puncto a. ponam pedē circini immobilem: ⁊ alterū pedem mobilem extendam vſqꝫ ad.b.⁊ deſcribā ſm̄ quantitatem ipſius linee date per ſecūdam petitionē circulū.c.b.d.f. rurſus alterā eius extremitatem.ſ.punctū b.faciam centrū: ⁊ per eandem petitionem ⁊ ſm̄ eiuſdem quantitatem lineabo circulum c.a.d.h.qui circuli interſecabūt ſe in duobus punctis: que ſint.c.d.⁊ alteram duarū ſectionum: ſicut ſectionem.d. continuabo cum ambabus extremitatibus date linee protractis lineis.d.a.d.b. per primā petitionem: quia ergo a puncto a.qđ eſt centrum circuli.c.b.d. ꝓtracte ſunt linee a.d.⁊ a.b.vſqꝫ ad eius circūferentiam ipſe erunt equales per diffinitionem circuli. Similiter quoqꝫ: quia a puncto b.quod eſt centrum circuli.c.a.d. protracte ſunt linee b.a.⁊.a.d.vſqꝫ ad eius circūferentiā ipſe erunt ēt equales: q̄a ergo vtraqꝫ duarū linearū.a.d.b.d.equalis ē linee a.b.vt probatum eſt: ipſe erūt equales inter ſe per primā cōceptionē: ergo ſuper datam lineam collocauimus triangulum equilaterū: quod eſt ꝓpoſitum. ¶ Si autē ſuper eandē lineaꝫ libeat collocare reliquas duas trianguloꝝ ſpēs.ſcꝫ.triangulū duū eq̄liū laterū ⁊ triangulū triū inequaliū laterū. ꝓtrahat̄ linea.a.b.i vtrāqꝫ p̄tem vſqꝫ quo occurret circūferentie amboꝝ circuloꝝ ſup̲ duo pūcta .f.⁊.h.⁊ poſito cētro i pūcto.a.lineet̄ circulus.e.h.g.ſm̄ quātitatē linee.a.h. Itēqꝫ poſito centro in pūcto.b.lineet̄ circulꝰ.e.f.g.ſm̄ quantitatē linee.b.f.hi aūt circuli interſecabūt ſe i duobꝰ pūctis q̄ ſūt e.g. Coniungant̄ igit̄ extremitates date linee cū altera dictarū ſectionū p̲ duas lineas rectas q̄ ſunt.a.g. b.g.⁊ quia he linee a.b.⁊.a.f.exeunt a centro circuli.c.d.f.ad eius circūferentiā ipſe erūt equales. Silr̄ quoqꝫ.a.b.⁊.b.h.quia exeūt a centro circuli.c.a.d.h.vſqꝫ ad ipſius circūferētiā ipſe erūt equales: Quia ergo vtraqꝫ duarū lineaꝝ.a.f.⁊.b.h.equalis eſt linee.a.b.ipſe erunt inter ſe equales.ergo poſito a.b.cōi erit.b.f.equalis.a.h.ſꝫ.b.f.eſt equalis.b.g.quia ābo exeūt a centro circuli.e.f.g.ad eius circūferentiam. Similit̄ quoqꝫ.a.h.eſt equalis.a.g.⁊ vtraqꝫ earū eſt maior.a.b.eo ꝙ vtraqꝫ duarū linearum.b.f.⁊.a.h.maior eſt.a.b. quare ſup̲ datam lineā collocauimus triangulū duoꝝ equaliū laterū: ¶ Triangulū etiā triū inequaliū laterū ſup̲ eandē lineā collocabimꝰ: ſi aliqđ pūctū exn̄s in circūferentia alterutrius duoꝝ maioꝝ circuloꝝ qđ nō ſit in altera duarū ſectionū: ⁊ cui nō obuiet f.h.cū in vtrālibet p̄tem ꝓtracta fuerit in cōtinuū ⁊ directū: ꝯiunxerimus p̲ duas lineas rectas cū ambabꝰ extremitatibꝰ date linee. Sit.n.pūctus.k.ſignatꝰ i circūferentia circuli.e.f.g.⁊ nō ſit i altera ſectionū nec occurrat ei.f.h.cū ꝓtraheret̄ in ꝯtinuū: ⁊ directū vſqꝫ ad eius circūferentiā. ꝓtraham ergo lineas.a.k.⁊.b.k.⁊ ſecabit linea.a.k.circūferentiā circuli.e.h.g.ſecet ergo in pūcto.l. eritqꝫ.b.k. equalis.a.l.quia.b.k.eſt equalis.b.g.⁊.a.l.equalis.a.g.quare.a.k.eſt maior.b.k.ſed ⁊.b.k.eſt maior.a.b.triangulꝰ ergo.a.b.k.eſt triū inequaliū laterū: Sic igitur ſup̲ datam lineam omnes trianguloꝝ ſpecies collocauimus.



Propoſitio. 2

A dato puncto cuilibet linee recte ꝓpoſite equam rectam lineam ducere.

¶ Sit.a.punctus datus ⁊.b.c.linea data volo a puncto.a.ducere lineā vnā equalem linee.b.c.in quācūqꝫ p̄tem contingat: cōiungam ergo punctū.a.cum altera extremitate linee.b.c.cum qua voluero.⁊ coniūgā ipſū.a.cū extremitate.c.per lineā.a.c.ſuper quā conſtituā triangulū eq̄laterū ſm̄ doctrinā p̄cedentis qui ſit.a. c.d.⁊ in illa extremitate linee date cum qua coniunxi punctū datū.ſ.in extremitate.c.ponā pedē circini imobilē ⁊ deſcribā ſuper ipſum circulū ſm̄ quantitatē ipſius date linee q̄ ſit circulꝰ.e.b.⁊ latus triāguli



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